

CLAIMS

1. A method for dispersing a substance, in particular a
5 fragrant or disinfectant substance, in a volume of air, in which method
a volume of air is made to flow inside a conduit (1) and a fragrant or
disinfectant substance is liberated inside the conduit by positioning a
cylinder (5) containing the substance to be dispersed and a compressed
propellant gas outside the conduit (1), and by expanding the propellant
10 gas so as to inject the substance inside the conduit, wherein injection
of the substance is controlled as a function of an indicated value of
the pressure (P11) of the propellant gas in the cylinder and of an
indicated value of the flow rate (Q) of the air passing through the
conduit.

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2. A method according to claim 1, wherein injection of the
propellant gas is discontinued when the air pressure in the conduit
(P15) passes below a low pressure threshold.

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3. A method according to claim 1, wherein the substance
propelled by the propellant gas is conveyed to the conduit by the
injection of an auxiliary flow.

4. A method according to claim 1, wherein the substance is
25 injected by opening a solenoid valve (7) controlled by a
microcontroller or a microprocessor (17) programmed for:

a) initialising (33) a variable representing the quantity (L) of
substance contained in the cylinder, a variable representing the
30 throughput (Q) of air flowing in the conduit, and a variable
representing the quantity (C) of substance to be dispersed in the
volume of air,

b) checking, in the form of a first test (35), the air pressure (P15)
35 in the conduit,

c) checking, in the form of a second test (37), the pressure (P11) of
the propellant gas in the cylinder, and

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d) opening the solenoid valve (7) during an open time (T), calculated as a function of pressure (P11), of the propellant gas, of the flow rate (Q) of the air passing through the conduit, and of the quantity (C) of substance to be liberated in the volume of air.

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5. A method according to claim 2, wherein the substance is injected by opening a solenoid valve (7) controlled by a microcontroller or a microprocessor (17) programmed for:

10 a) initialising (33) a variable representing the quantity (L) of substance contained in the cylinder, a variable representing the throughput (Q) of air flowing in the conduit, and a variable representing the quantity (C) of substance to be dispersed in the volume of air,

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b) checking, in the form of a first test (35), the air pressure (P15) in the conduit,

c) checking, in the form of a second test (37), the pressure (P11) of
20 the propellant gas in the cylinder, and

d) opening the solenoid valve (7) during an open time (T), calculated as a function of pressure (P11), of the propellant gas, of the flow rate (Q) of the air passing through the conduit, and of the quantity
25 (C) of substance to be liberated in the volume of air.

6. A method according to claim 3 wherein the quantity of substance (C) to be liberated in the volume of air is calculated by the microcontroller or microprocessor as a function of a variable
30 representing an initial quantity of pollutant material in the volume of air.

7. A method according to claim 1, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed
35 chamber containing air under pressure, or by circulation.

8. A method according to claim 2, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed chamber containing air under pressure, or by circulation.

5 9. A method according to claim 3, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed chamber containing air under pressure, or by circulation.

10 10. A method according to claim 4, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed chamber containing air under pressure, or by circulation.

15 11. A method according to claim 5, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed chamber containing air under pressure, or by circulation.

20 12. A method according to claim 6, wherein the volume of air is made to flow inside the conduit (1) by injection from a compressed chamber containing air under pressure, or by circulation.

25 13. A device for liberating a substance, in particular a fragrant or disinfectant substance, into a volume of air flowing in a conduit (1) comprising an injection pipe (3) mounted inside the conduit, an external cylinder (5) containing the substance to be dispersed together with a propellant gas under pressure, and a valve (7) mounted on a communicating connection (9) between the cylinder and the injection pipe, the propellant gas expanding on opening the valve so as to convey a quantity of the substance to be dispersed from the cylinder into the conduit via the injection pipe, it additionally
30 including a pressure sensor (11) determining the pressure in the cylinder and a flow rate sensor (13) determining the flow rate of the air passing through the conduit.

35 14. A device according to claim 13, and further comprising a temperature sensor determining the temperature of the air flowing in the conduit.

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15. A device according to claim 13, and further comprising a pressure sensor (15) determining the pressure in the conduit.

16. A device according to claim 13, and further comprising a
5 circuit for injecting an auxiliary flow mounted as a bypass in relation to the communicating connection.

17. A device according to claim 13, wherein the valve (7) is a solenoid valve controlled by a microcontroller or a microprocessor
10 (17).

18. A device according to claim 17, wherein the microcontroller (17) is linked to a sensor (11) indicating the pressure of the propellant gas in the cylinder (5) and a sensor (13) indicating the
15 flow rate of the air passing through the conduit (1).

19. A device according to claim 18, and further comprising a sensor determining a quantity of pollutant matter present in the volume of air and linked to the microcontroller or microprocessor.
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20. A device according to claim 13, wherein the injection pipe (3) is provided with holes (3B) of which the diameter is greater when the hole is positioned in a part of the pipe that is more central with respect to the conduit (1).
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21. A method of using the device of claim 17, wherein the device is fitted on board a vehicle by installing the injection pipe (3) in a ventilation conduit (1) of the vehicle, the substance is injected into the conduit by expanding a propellant gas, and the solenoid valve (7)
30 and the microcontroller or microprocessor (17) are supplied with the aid of a self-contained battery fitted on board the vehicle.